



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/541,564

07/06/2005

Jozef J. I. Van Dun

62996A

5827

109

7590

06/24/2009

The Dow Chemical Company
Intellectual Property Section
P.O. Box 1967
Midland, MI 48641-1967

EXAMINER

GRAY, JILL M

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

06/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,564

Applicant(s)

VAN DUN ET AL

Examiner

Jill Gray

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3, 4, 8, 10-16 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 4, 8, 10-16 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 5, 2009 has been entered.
2. Pursuant to the entry of the amendment of June 5, 2009 the status of the claims is as follows: Claims 1-2, 5-7, 9, and 17-18 are cancelled. Claims 3, 8, 10-14, 16, and 19 are amended. Currently, claims 3-4, 8, 10-16, and 19 are pending and under prosecution.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 3-4, 8, 10-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gessner 5,108,827 in view of PCT Publication WO 01/49907 A2 (NewKirk) for reasons of record.

Gessner discloses multiconstituent fibers composed of dispersed blends of at least two different immiscible thermoplastic polymers having a dominant continuous phase with at least one noncontinuous phase dispersed therein. Gessner discloses that the dispersed phase exists as an elongated fibrillar polymer domain, which meets the

"dispersed polymer in particulate form" requirement of present claim 3. See entire document, and for example abstract.

Regarding Independent claim 3

Gessner is as set forth above but does not specifically disclose the interfacial tension between his polymers. Also, Gessner does not specifically disclose bicomponent fibers with a polyolefin continuous phase or a sheath-core configuration wherein the sheath has a thickness smaller than the average size of the particulate dispersed polymer.

Regarding the interfacial tension, while Gessner is silent as to the specific interfacial tension between his polymers, it is noted that he teaches the same type of polymers disclosed by applicants as being suitable. Accordingly, the examiner has reason to believe that the interfacial tension of the polymer mixtures disclosed by Gessner are within the instant claimed range in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

Newkirk teaches bicomponent and multicomponent fibers comprising a blend of polyolefins, wherein one embodiment includes the polymer components arranged in a sheath-core configuration and the sheath is formed of the polymer blend to impart the desired properties to the fibers. In addition, Newkirk teaches that his blends include immiscible and miscible polymer blends and that polyolefin can be the continuous phase. See entire document, and for example pages 4-5 and 9-12.

Though Gessner is silent as to the formation of bicomponent fibers, it would have been obvious to one having ordinary skill in the art at the time the invention was made

to modify the teachings of Gessner by forming bicomponent fibers as taught by Newkirk, with the reasonable expectation of success of producing fabrics and nonwovens having good tensile properties and excellent softness. Moreover, the teachings of Newkirk would have provided a suggestion to the skilled artisan to form the bicomponent fibers of Gessner in a sheath-core form, as known in the art, to impart desired properties to the resultant fibers.

Regarding the thickness of the sheath, this limitation would have been obvious to determine during routine experimentation. Moreover, this requirement is drawn to the size of the fiber and changes in size ordinarily are not a matter of invention.

Regarding claims 4, 8, 10-16, and 19

Gessner further teaches:

Regarding claims 4, and 12-15, Gessner is as set forth above, but does not specifically teach the viscosity, melting point and glass transition point differential. Gessner discloses that the skilled artisan can select from several polymers commensurate with the desired end properties as long as the polymers are immiscible. It would have been obvious to one having ordinary skill in the art to choose the viscosity, specific melting point differential and glass transition point differential during routine experimentation for optimization purposes.

Regarding claim 16, the limitation with respect to the particulate thickness and particle size these requirements are drawn to the size of the particles, wherein changes in size are not construed to be a matter of invention in the absence of factual evidence to the contrary.

Regarding claims 10-11, Gessner teaches fibers comprising PE dispersed in a PP phase. This teaching would have provided motivation to the skilled artisan for multiconstituent fibers comprising a core of propylene polymer.

Regarding claim 19, Figure 1 discloses wherein the dispersed polymer comprises a portion of the fiber surface.

Therefore, the combined teachings of Gessner and Newkirk would have rendered obvious the invention as claimed in present claims 3-4, 8, 10-16, and 19.

Response to Arguments

5. Applicant's arguments filed June 5, 2009 have been fully considered but they are not persuasive.

Applicants argue that Gessner does not relate to bicomponent fiber and in particular does not relate to core-sheath bicomponent fibers now recited in the present claims.

In this regard, the combined teachings of Gessner and Newkirk would have provided a suggestion to the skilled artisan to modify the teachings of Gessner by forming his bicomponent fibers into a sheath/core configuration.

Applicants argue that neither Gessner nor Newkirk teach or suggest that the average size of the particles are bigger than the thickness of the sheath.

In this regard, it is the examiner's position that it would have been obvious during routine experimentation to modify and adjust the particle size as well as the thickness of the sheath commensurate on the desired properties of the end product, for example,

properties such as the softness and/or hand of the fibers, or for increased roughness, surface area, etc.

Accordingly, the examiner's position remains that the combined teachings of Gessner and Newkirk would have rendered obvious the invention as claimed in present claims 3-4, 8, 10-16 and 19.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/
Primary Examiner
Art Unit 1794

Application/Control Number: 10/541,564
Art Unit: 1794

Page 7

jmg